

WHAT IS CLAIMED IS:

1. A wireless communication system, comprising:

a first communication device for carrying out an inquiry and paging with respect to a wireless communication device located within a communication allowance range, and starting a connection with the wireless communication device; and

a second communication device for receiving and transmitting data with the wireless communication device when the wireless communication device connected with the first communication device is cut off by a hard hand-off, wherein the first communication device, if connected with the wireless communication device, transmits to the second communication device information on an address and a clock of the wireless communication device which are determined based on the inquiry, and if the first communication device is disconnected with the wireless communication device, the second communication device carries out paging with respect to the wireless communication device based on the received information on the address and clock to start a connection with the wireless communication device.

2. The wireless communication system as claimed in claim 1, wherein the first communication device and the second communication device are connected by a wire network.

3. The wireless communication system as claimed in claim 2, wherein the first communication device, the second communication device, and the wireless communication device are respectively provided with a Bluetooth system.

4. The wireless communication system as claimed in claim 2, wherein the first communication device, after being connected with the wireless communication device, checks a connection state with the wireless communication device at every predetermined period, and, if the first communication device is disconnected from the wireless communication device, the second communication device is instructed to perform the paging with respect to the wireless communication device.

5. The wireless communication system as claimed in claim 4, wherein the second communication device is instructed by the first communication device.

6. The wireless communication system as claimed in claim 4, wherein data packets received and transmitted after the connection of the first communication device with the wireless communication device comprise an activation address indicating an activation state of the wireless communication device, and if the activation address is not received through a time slot of a predetermined period allocated to the wireless communication device, the first communication device decides that the connection with the wireless communication device is cut off.

7. The wireless communication system as claimed in claim 4, wherein the wireless communication device scans the paging carried out by the second communication device.

8. A communication method for wireless communication systems, comprising:
carrying out an inquiry and a paging by a first communication device;

starting data reception and transmission of the first communication device with a wireless communication device located within a communication allowance range based on the inquiry and paging;

transmitting from the first communication device to a second communication device information on an address and clock of the wireless communication device which is determined at least based on the inquiry;

carrying out the paging with respect to the wireless communication device by the second communication device, based on the received address and clock information, if the wireless communication device is disconnected with the first communication device by a hard hand-off; and

starting the data reception and transmission of the wireless communication device with the second communication device by the carrying-out of the paging.

9. The communication method as claimed in claim 8, wherein the first communication device and the second communication device are connected by a wire network.

10. The communication method as claimed in claim 9, wherein the first communication device, the second communication device, and the wireless communication device are respectively provided with a Bluetooth system.

11. The communication method as claimed in claim 9, wherein the first communication device performs steps comprising:

checking a connection state with the wireless communication device at every predetermined period after being connected with the wireless communication device; and

instructing the second communication device to perform the paging with respect to the wireless communication device, if the first communication device is to be disconnected from the wireless communication device.

12. The communication method as claimed in claim 11, wherein data packets received and transmitted after the connection of the first communication device with the wireless communication device include an activation address indicating an activation state of the wireless communication device, and if the activation address is not received through a time slot of a predetermined period allocated to the wireless communication device, the first communication device decides that the connection with the wireless communication device is cut off.

13. The communication method as claimed in claim 11, wherein the wireless communication device performs a step of scanning the paging carried out by the second communication device.